PERATION TREATY (PCT)



## (19) World Intellectual Property Organization International Bureau

## (43) International Publication Date 13 May 2004 (13.05.2004)

# PAIPO

## 1 (1881 | 1888) | 1 | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 | 1888 | 1888

PCT

## (10) International Publication Number WO 2004/040314 A1

(51) International Patent Classification<sup>7</sup>:

G01N 33/58

(21) International Application Number:

PCT/DK2003/000743

(22) International Filing Date: 31 October 2003 (31.10.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

PA 2002 01653

31 October 2002 (31.10.2002) DK

(71) Applicant (for all designated States except US): CHEMOMETEC A/S [DK/DK]; Gydevang 43, DK-3450 Allerød (DK).

(72) Inventors; and

- (75) Inventors/Applicants (for US only): LARSEN, Rasmus, Dines [DK/DK]; Yrsavej 10, 1tv., DK-2000 Frederiksberg (DK). HANSEN, Frans, Ejner, Ravn [DK/DK]; Svanholmsvej 1, 3th, DK-1905 Frederiksberg (DK).
- (74) Agent: HØIBERG A/S; St. Kongensgade 59A, DK-1264 Copenhagen K (DK).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR,

CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

### **Declarations under Rule 4.17:**

- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations
- of inventorship (Rule 4.17(iv)) for US only

#### Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

## (54) Title: A METHOD FOR ASSESSMENT OF PARTICLES

(57) Abstract: The invention relates to imaging methods for assessing quality or quantity parameters of particles in a sample, wherein the particles contain less than 10<sup>6</sup> analyte detectable positions. The method comprises 1) mixing the sample with a targeting species capable of binding an analyte position and a labelling agent, 2) arranging the sample in an exposing domain, allowing electromagnetic signals from the sample to pass to the exterior, 3) exposing a representation of said signals onto an array of detection elements, wherein the representation is subject to a linear enlargement, so that the ratio of the image of a linear dimension on the array of detection elements to the original linear dimension in the exposing domain is smaller than 20:1, 4) detecting the representation as intensities by said detection elements, 5) processing the intensities to identify the particles, and 6) obtaining the quality or quantity parameter.